

DT20 Hi Distance Sensor

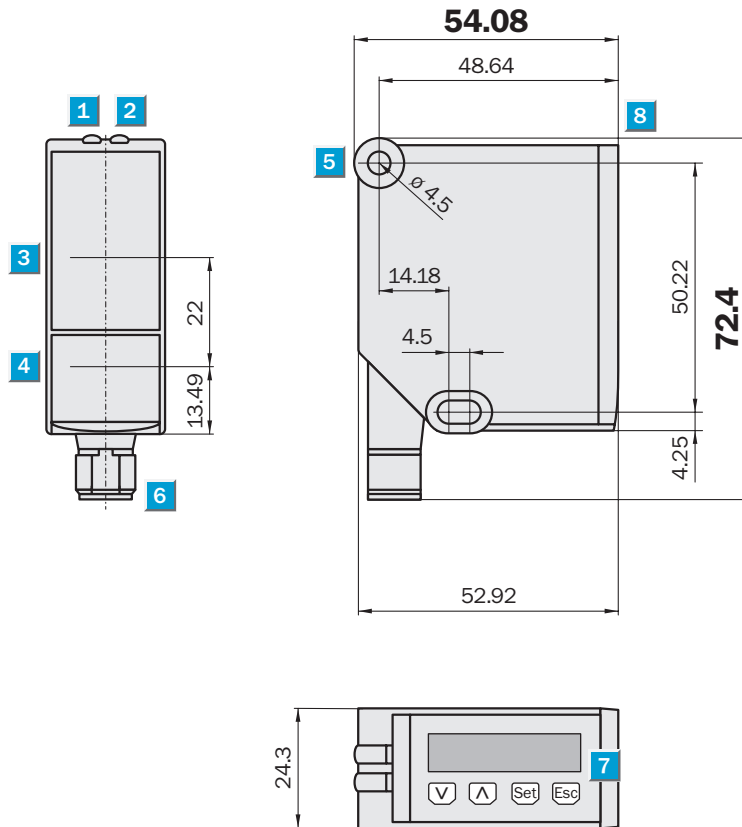


	Measurement range 100 ... 1,000/100 ... 600/ 100 ... 300/50 ... 150 mm
Distance sensor, scanner mode	

- Analogue output 4 ... 20 mA
- High measuring accuracy
- Power-on LED
- Display
- Not sensitive to reflective objects



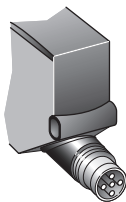
Dimensional drawing



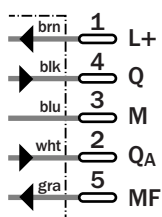
- 1 Power
- 2 Status indicator
- 3 Optical axis – receiver
- 4 Optical axis – sender
- 5 Fixing hole
- 6 Plug M12, 5-pin
- 7 Display and operating panel
- 8 Reference edge

Connection type

DT20 Hi



5-pin, M12



Technical data		DT20 Hi	P224B	P214B	P244B	P254B	N224B	N214B	N244B	N254B		
Measurement range												
Object with 6 % ... 90 % remission	100 ... 1,000 mm											
Object with 6 % ... 90 % remission	100 ... 600 mm											
Object with 6 % ... 90 % remission	100 ... 300 mm											
Object with 6 % ... 90 % remission	50 ... 150 mm											
Light source ¹⁾	Laser class 2											
Light type	Red light											
Light spot diameter	3 mm at 100 ... 600 mm											
Supply voltage V_s ²⁾	10 ... 30 V DC											
Power consumption ³⁾	1.8 W											
Residual ripple ⁴⁾	≤ 5 V _{SS}											
Analogue output ⁵⁾	4 ... 20 mA											
Accuracy ⁶⁾	± 10 mm ⁸⁾											
	± 2 mm ⁷⁾											
	± 1 mm											
	± 0.5 mm											
Reproducibility ⁹⁾	± 5 mm ⁸⁾											
	± 1 mm ⁷⁾											
	± 0.5 mm											
	± 0.2 mm											
Resolution	< 1 mm ⁸⁾											
	< 0.5 mm ⁷⁾											
	< 0.2 mm											
	< 0.1 mm											
Response time ¹⁰⁾	< 15 ms											
Output rate	< 2.8 ms											
Temperature drift	0.5 mm/K ⁸⁾											
	0.25 mm/K ⁷⁾											
Switching outputs	PNP, Q/ \bar{Q}											
	NPN, Q/ \bar{Q}											
Signal voltage PNP	HIGH = V _s - (< 2 V)/LOW = 0 V											
Signal voltage NPN	HIGH = V _s /LOW ≤ 2 V											
Connection type	M12 plug, 5-pin											
VDE protection class	<input type="checkbox"/>											
Enclosure rating	IP 65											
Ambient temperature T_A	Operation -20 ... +55 °C ¹¹⁾											
	Storage -40 ... +60 °C											
Weight	135 g											
Housing material	Metal											

1) Average service life 50,000 h at T_A = +25 °C
 2) Limit values, reverse-polarity protected
 Operation in short-circuit protected network max. 8 A
 3) Without load

4) May not exceed or fall short of V_s tolerances
 5) Freely scalable
 6) At 6 ... 90 % remission
 7) From 100 ... 600 mm
 8) From 600 ... 1,000 mm

9) Setting: Avg = medium
 10) Lateral entry of object into measurement range
 11) At 24 V
 12) Continuous change of distance in measurement area

Reproducibility and response time dependent on set mode					
Mode	Response time ¹²⁾	Reproducibility			
		1,000 mm	600 mm	300 mm	150 mm
Fast	2.5 ms	± 5 mm	± 2 mm	± 1 mm	± 0.5 mm
Medium	10 ms	± 2.5 mm	± 1 mm	± 0.5 mm	± 0.25 mm
Slow	40 ms	± 1.25 mm	± 0.5 mm	± 0.25 mm	± 0.13 mm

Ordering information					
Type	Order no.	Type	Order no.	Type	Order no.
DT20-P224B	1040405	DT20-N214B	1040140	DT20-P254B	1041278
DT20-N224B	1044216	DT20-P244B	1040406	DT20-N254B	1041279
DT20-P214B	1040012	DT20-N244B	1040713		

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